DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE: BRSTO-0076-01(036) Lincoln
P.I. No.: 232310
SR 47 @ Little River

OFFICE: Engineering Services

DATE: September 29, 2010

FROM: Ronald E. Wishon, State Project Review Engineer REW

TO: Foster Grimes, District Design Squad Leader, Tennille

SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES

The VE Study for the above project was held August 9-12, 2010. Responses were received on September 29, 2010. Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. The Project Manager shall incorporate the VE alternatives recommended for implementation to the extent reasonable in the design of the project.

ALT #	Description	Potential Savings/LCC	Implement	Comments
A-9B	Reduce the width of the shoulders on the bridge from 8 feet to 4 feet	$922,000	No	Upon completion of construction, this bridge will function as a two-lane facility. Based on traffic and percentage of trucks utilizing this roadway, the 8-foot shoulders are appropriate. These shoulders will provide reasonable refuge for stranded motorists and allow for emergency vehicle access.
A-9R	Reduce the width of the shoulders on the roadway approaches to the bridge from 10 feet to 4 feet	Proposed = $1,217,000 Actual = $945,968	Yes, partially	The width of the shoulders on the roadway approaches to the bridge will be reduced from 10 feet to 8 feet. This width will provide refuge for a disabled vehicle.
A-10	Detour traffic away from the bridge and construct the project on existing alignment	$2,885,000	No	This was proposed as an alternate in the original concept and it was determined that the economic cost to commuters would be substantially higher than the cost savings for the Department. The detour would add 25 to 30 additional miles for the 2,925 daily commuters who use this route to and from work. Emergency vehicles traveling from Lincoln County to Richmond County would also be delayed. These concerns would diminish local support of the project.

A-13	Construct the bridge with a shallower depth 90 foot center span using Type III PSC beams and use steel plate girders for the remaining structure	$124,000	No	The proposed project provides two alternates for the construction of the bridge using a PSC Bulb-T alternate and a steel plate girder alternate. Type III PSC beams may be unstable at a 90 foot span; generally this length of span would require a Type IV or a 54" Bulb-T. In addition, mixing structure types would not meet the required aesthetics.
D-2	Eliminate the Foundation Backfill Material on top of the Rock Embankment	$42,000	No	Type II backfill material must be placed along the top of the rock embankment bench area in order for silt fence to be properly installed.
F-3	Use sheet piling to stabilize the inside of the new embankment and shift the new alignment 20 feet closer to the existing roadway	$1,220,000	Yes, with modifications	The proposed alignment can be shifted closer to the existing roadway; however, this will be accomplished using a temporary retaining wall in lieu of a sheet pile wall. The actual wall type will be determined by the Contractor in order to obtain the best price.
F-5	Construct an MSE wall along the edge of the existing/new rock embankment to hold the new roadway embankment	$1,969,000	No	Constructing an MSE wall at this site is not recommended. The proposed wall would be constructed overtop of portions of the existing fill, rock embankment and proposed embankment. An MSE wall constructed in this manner would be susceptible to stability failures as well as differential settlement.

The Office of Engineering Services concurs with the Project Manager's responses.

Approved: _____ **Date:** 9/30/10

Gerald M. Ross, PE, Chief Engineer

REW/LLM
Attachments
c: Ben Buchan
George Brewer/Alan Smith/Foster Grimes/Robin Tanner
Paul Liles/Bill Duvall/Bill Ingalsbe/Cindy Pollard
Jim Kitchings
Russell Merritt/Lynn Bean
Ken Werho
Lisa Myers
Matt Sanders

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

DATE September 29, 2010

FCG

FROM Foster Grimes, District Design Squad Leader

TO Ron Wishon, Project Review Engineer

Attn: Lisa Myers

SUBJECT **BRST0-0076-01(036) – Lincoln County**
P.I. No.: 232310
Value Engineering Study: Response to Recommendations

These are the responses to the Value Engineering Alternatives recommended by the Value Engineering Team:

Item No.	Recommendations	Potential Savings	Implement	Comments
A-9B	Reduce the width of the shoulders on the bridge from 8 feet to 4 feet.	$ 710,000	No	Upon completion of the construction, this bridge will function as a two-lane facility. Based on the traffic and percentage of trucks utilizing this roadway, the 8-foot shoulders are appropriate. These shoulder widths provide reasonable safety for stranded motorists and emergency vehicle access.
A-9R	Reduce the width of the shoulders on the roadway approaches to the bridge from 10 feet to 4 feet. (15 ½ to 7 ½)	$ 1,275,000	Yes/ Partially $945,968	Reduce the width of the shoulders on the roadway approaches to the bridge from 10 feet to 8 feet of useable shoulder. (15 ½ to 11 ½) This will allow for a vehicle with mechanical problems to safely pull out of the

				travel lane and not impede traffic. A Concept Revision and Design Variance would be required.
A-10	Detour traffic away from the bridge and construct the project on the existing alignment.	$ 2,504,000	No	This was listed as alternate "B" in the original concept and was found that the economic cost to commuters would be substantially higher than the cost savings the Department would incur. To place a 25 to 30 mile detour on this route would cause adverse time delays for the 2,925 daily commuters that take this route to and from work which would diminish local support of this project. Emergency Vehicles traveling from Lincoln County to Richmond County would also be delayed.
A-13	Construct the bridge with a shallower depth 90-foot center span using Type 3 PSC beams and use steel plate girders for the remaining spans.	$ 124,000	No	The proposed project provides two alternates for the construction of the bridge including a PSC Bulb-T alternate and a steel plate girder alternate. Type III PSC beams may be unstable at a 90 feet span; generally this length of a span would require a Type IV or a 54 inch Bulb-T. Also, the approach of mixing structure types would not meet the required aesthetics.
D-2	Eliminate the Type II backfill material from the top of the rock embankment bench area.	$ 42,000	No	During the construction of this project the Type II backfill material is placed along the top of the rock embankment bench area in order for Silt Fence to be installed

				along the edge of this berm prior to in place embankment being installed. This is necessary so that the silt fence can be staked in.
F-3	Use sheet piling to stabilize the inside of the new roadway embankment and shift the new elevated alignment 20 feet closer to the existing roadway.	$ 1,220,000	Yes – with modifications	The proposed roadway alignment can be shifted closer to the existing roadway; however, this will be accomplished using a temporary retaining wall in lieu of specifying a "sheet pile wall". The temporary retaining wall may be constructed utilizing sheet piling but the actual wall type will be determined by a contractor design in order to obtain the best price.
F-5	Construct an MSE wall along the edge of the new roadway and construct the new embankment between the MSE wall and the existing roadway.	$ 1,969,000	No	Constructing an MSE wall at this site is not recommended. The proposed wall would be constructed overtop of portions of the existing fill, rock embankment and proposed embankment. An MSE wall constructed in this manner would be susceptible to stability failures as well as differential settlement.
Total Savings			$945,968	

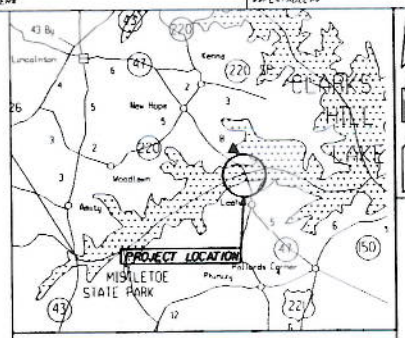
If any further assistance is needed, please contact Foster C. Grimes at (478) 552-4643.

FCG

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA	BRSTO-0076-01(036)	1	

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

PLAN AND PROFILE OF PROPOSED
STATE ROUTE 47 BRIDGE REPLACEMENT
OVER LITTLE RIVER



LOCATION SKETCH

DESIGN DATA:

TRAFFIC A.D.T.:	5,850 (2014)
TRAFFIC A.D.T.:	9,000 (2034)
DIRECTIONAL DIST:	60%
K :	9 %
TRUCKS:	8.5 %
24 HR. TRUCKS %:	7.5 %
S.U.:	4 %
COMB.:	3.5 %
SPEED DESIGN:	55 MPH

LOCATION & DESIGN APPROVAL DATE: 9/1/2006

FUNCTIONAL CLASS: RURAL MINOR ARTERIAL

THIS PROJECT IS 36 % IN LINCOLN COUNTY 64% IN COLUMBIA COUNTY AND IS 100% IN CONG. DIST. NO. 10 .

PROJECT DESIGNATION: EXEMPT

DESIGNED IN ENGLISH UNITS.

PDP CLASSIFICATION: MINOR

THIS PROJECT HAS BEEN PREPARED USING ASSUMED HORIZONTAL CONTROL OF THE EAST ZONE AND THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.

THE DATA, TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS OR IN ANYWAY INDICATED THEREBY, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, ARE BASED UPON FIELD INVESTIGATIONS AND ARE BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS, HOWEVER, THE SAME ARE SHOWN AS INFORMATION ONLY, ARE NOT GUARANTEED, AND DO NOT BIND THE DEPARTMENT OF TRANSPORTATION IN ANY WAY. THE ATTENTION OF BIDDER IS SPECIFICALLY DIRECTED TO SUBSECTIONS 102.04, 102.05, AND 104.03 OF THE SPECIFICATIONS.

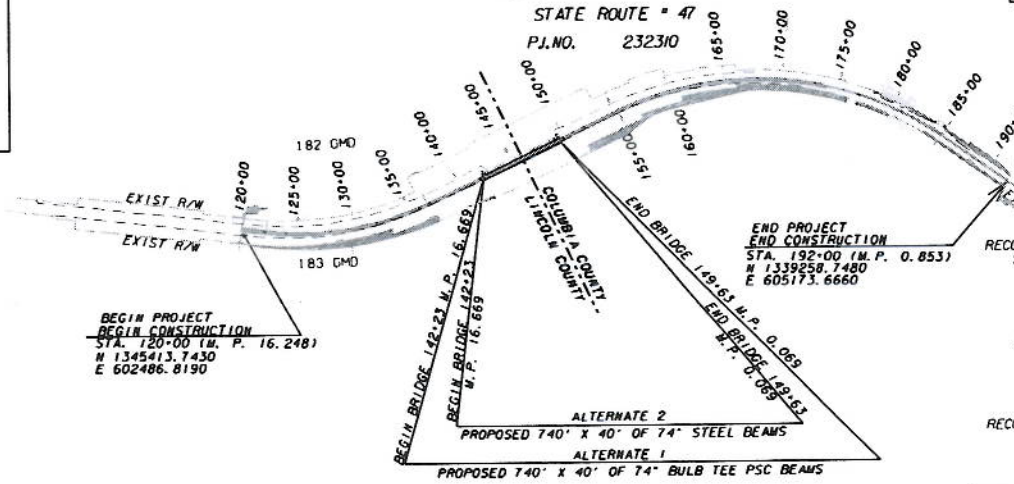
3/17/2007

FEDERAL AID PROJECT
BRSTO-0076-01(036)
LINCOLN/COLUMBIA COUNTIES

FEDERAL ROUTE = N/A

STATE ROUTE = 47

P.I. NO. 232310



NOTE :
ALL REFERENCES IN THIS DOCUMENT, WHICH INCLUDES ALL PAPERS, WRITINGS, DOCUMENTS, DRAWINGS, OR PHOTOGRAPHS USED OR TO BE USED IN CONNECTION WITH THIS DOCUMENT, TO "STATE HIGHWAY DEPARTMENT OF GEORGIA", "STATE HIGHWAY DEPARTMENT", "GEORGIA STATE HIGHWAY DEPARTMENT", "HIGHWAY DEPARTMENT", OR "DEPARTMENT" WHEN THE CONTEXT THEREOF MEANS THE STATE HIGHWAY DEPARTMENT OF GEORGIA, AND SHALL BE DEEMED TO MEAN THE DEPARTMENT OF TRANSPORTATION.

PREPARED BY: Robin S. Tanner
CAD OPT II

RECOMMENDED FOR SUBMISSION BY: Douglas Alan Smith
DISTRICT DESIGN ENGINEER

SUBMITTED BY: George M. Brewer
DISTRICT PRECONSTRUCTION ENGINEER

RECOMMENDED FOR APPROVAL BY: _____
DISTRICT ENGINEER

DATE _____ CHIEF ENGINEER

LENGTH OF PROJECT	COUNTY Nos. 181/013 Project No. BRSTO-0076-01(036)
	MILES
NET LENGTH OF ROADWAY	1.208
NET LENGTH OF BRIDGES	0.138
NET LENGTH OF PROJECT	1.346
NET LENGTH OF EXCEPTIONS	0.000
GROSS LENGTH OF PROJECT	1.346

PLANS COMPLETED	
REVISIONS	

BRSTO-0076-01(036) LINCOLN/COLUMBIA COUNTIES

PRECONSTRUCTION STATUS REPORT FOR PI:232310-

PROJ ID : 232310- **SR 47 @ LITTLE RIVER 10.5 MI SE OF LINCOLNTON**
COUNTY : Columbia, Lincoln
LENGTH (MI) 0.40
PROJ NO.: BRST0-0076-01(036)
PROJ MGR: Grimes, Foster
AOHD Initials: GMB
OFFICE : District 2
CONSULTANT: No Consultant, GDOT In-House Design
SPONSOR : GDOT
DESIGN FIRM: GDOT D2 Design Office

MPO: Not Urban
TIP #:
MODEL YR :
TYPE WORK: Bridges
CONCEPT: BR REPL
PROG TYPE: Replacement
Prov. for ITS: N
BOND PROJ :

PRIORITY CODE:
DOT DIST: 2
CONG. DIST: 10
BIKE: N
MEASURE: E
NEEDS SCORE: 5
BRIDGE SUFF: 48.70

MGMT LET DATE : 07/22/2011
MGMT ROW DATE : 07/16/2010
BASELINE LET DATE: 07/05/2011
SCHED LET DATE : 2/14/2012
WHO LETS?: GDOT Let
LET WITH :

BASE START	BASE FINISH	LATE START	LATE FINISH	TASKS	ACTUAL START	ACTUAL FINISH	%
				Concept Development	8/18/2006	9/4/2006	100
				Concept Meeting	8/9/2006	8/9/2006	100
				PM Submit Concept Report	8/10/2006	8/10/2006	100
				Concept Report Review and Comments	8/17/2006	8/24/2006	100
				Management Concept Approval Complete	**8/24/2006**	**9/4/2006**	**100**
	3/29/2010		10/14/2010	Value Engineering Study	5/20/2010		83
				Public Information Open House Held	11/19/2009	11/19/2009	100
	4/22/2010		11/4/2010	**Environmental Approval**	**2/1/2008**		40
				Field Surveys/SDE	1/11/2007	10/26/2007	100
	4/22/2010		**12/2/2010**	**Preliminary Plans**	**1/15/2008**		50
	3/5/2010			Preliminary Bridge Design	4/7/2008	2/11/2010	100
				Underground Storage Tanks	2/8/2008	2/14/2008	100
7/2/2010	11/18/2010	2/11/2011	6/30/2011	404 Permit Obtainment			0
5/14/2010	5/14/2010	12/24/2010	12/24/2010	PFPR Inspection			0
5/17/2010	5/28/2010	12/27/2010	1/7/2011	R/W Plans Preparation			0
5/31/2010	**7/1/2010**	**1/10/2011**	**2/10/2011**	**R/W Plans Final Approval**			0
				L & D Approval	8/24/2006	9/1/2006	100
7/16/2010	7/20/2010	2/25/2011	3/1/2011	R/W Authorization			0
9/29/2010	10/12/2010	5/11/2011	5/24/2011	Stake R/W			0
				Soil Survey	1/29/2008	2/23/2009	100
3/8/2010	7/21/2010	10/8/2010	2/22/2011	Bridge Foundation Investigation			0
6/21/2010	**12/8/2010**	**1/31/2011**	**7/20/2011**	**Final Design**			0
8/12/2010	12/1/2010	3/24/2011	7/13/2011	Final Bridge Plans Preparation			0
2/3/2011	2/3/2011	9/15/2011	9/15/2011	FFPR Inspection			0
2/17/2011	3/2/2011	9/29/2011	10/12/2011	Submit FFPR Responses (OES)			0

PROGRAMMED FUNDS

Activity	Approved	Proposed	Cost	Fund	Status	Date Auth
PE	2000	2000	910,627.13	Q10	AUTHORIZED	10/25/1999
ROW	2011	2011	166,400.00	L1C0	PRECST	
CST	2014	2013	12,903,313.82	L1C0	PRECST	

Cost Estimate Amount

Activity	Amount	Date
PE	$910,627.13	
ROW	$160,000.00	3/18/2010
CST	$11,470,999.00	3/18/2010

STIP AMOUNTS

Activity	Cost	Fund
PE		Q10
ROW	83,561.26	L1C0
CST	0.00	L1C0

PDD: within 0000477 (9/13/01). Re-assigned to Road Design. 2/27/03.
Bridge: SWW 07/09/10 (TRUSS BRIDGE REPLACEMENT)
Design: (RT) Need APD-EC
EIS: CE/NotApvd/NotonSchedRW/9-23-10 (JK-JJG)
LGPA: LINCOLN SGN UTILITIES 8-2-99|RESCISSION LETTER SENT TO LINCOLN 3-7-08.
Programming: #1 3-04|#2 5-07
Traffic Op: CAH|BR REPL PRJCT w/ 0000477/COLUMBIA|S&M PLNS N/R|030801|$
Utility: (JW) Need 2nd sub plan from PM 9/23/2010
EMG: BRIDGE REPLACEMENT

District Comments

1/29/08 PPlans to Env, Util, & Matls
8/1/10 VE scheduled for August, Chief ok'd raising bridge
9/7/10 Preparing revised profile and responding to VE study

Prel. Parcel CT: **Total Parcel in ROW System:** **Cond. Filed:** **Acquired by:** DOT ***DEEDS CT:***
Under Review: **Options - Pending:** **Relocations:** **Acquisition MGR:**
Released: **Condemnations- Pend:** **Acquired:** **R/W Cert Date:**